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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,088	07/08/2003	Hiroyuki Kawamura	NIL-197	8365

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RADER FISHMAN & GRAUER PLLC
LION BUILDING
1233 20TH STREET N.W., SUITE 501
WASHINGTON, DC 20036

EXAMINER

HERNANDEZ, NELSON D

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,088

Applicant(s)

KAWAMURA ET AL.

Examiner

Nelson D. Hernandez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/23/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 12-18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Response to Amendment

3. The Examiner acknowledges the preliminary amendments filed on July 8. Claims 4 and 5 have been amended. Claims 6-8 have been newly added.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 2, 3/1, 3/2, 5/1, 5/2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield, 2002/0167589 A1 in view of Konishi, US Patent 5,420,635.**

Regarding claim 1, Schofield discloses an imaging system (See figs. 18 and 19) comprising: infrared ray illuminating means (Fig. 19, 162) for radiating an infrared ray; imaging means for taking an image (Fig. 19: 14) of a place illuminated by the infrared ray illuminating means and converting the image into an electric signal; and an image processor (Figs. 18: 18; 21: 18 and 22: 18) for varying signal accumulating time of the imaging means at a predetermined cycle and continuously and periodically forming images of different light exposure amount (Page 11, ¶ 0089-0090 and page 12, ¶ 0094-0096).

Schofield does not explicitly disclose that the image processor sets a mask for adjusting a brightness level between the images of different light exposure amount.

However, Konishi teaches a method for correcting the brightness of an image, wherein two images with different exposure values are taken (and stored in memories 21 and 22 as shown in fig. 5) and a mask is generated (See fig. 11: 63) and applied to the images when combined (using multiplexer 65 as shown in fig. 11) to adjust the

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bright areas of the image (See figs. 12a-12d) in order to improve the dynamic range of a video camera (Fig. 5) (Col. 15, lines 5-47; col. 17, line 53 – col. 18, line 36; col. 24, line 62 – col. 25, line 56).

Therefore, taking the combined teaching of Schofield in view of Konishi as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schofield by setting a mask for adjusting a brightness level between the images of different light exposure amount. The motivation to do so would have been to increase the dynamic range of the imaging system by properly exposing the bright areas of an image as suggested by Konishi (Col. 13, line 60 – col. 14, line 14).

Regarding claim 2, the combined teaching of Schofield in view of Konishi as applied to claim 1 teaches that the image processor sets the mask on the higher brightness level, of the images of different light exposure amount (Konishi teaches applying the mask to both images; col. 25, lines 39-56). Grounds for rejecting claim 1 apply here.

Regarding claims 3/1 and 3/2, the combined teaching of Schofield in view of Konishi as applied to claim 1 teaches that the image processor adjusts the brightness level, according to the brightness of the mask (See Konishi, col. 24, line 62 – col. 25, line 56). Grounds for rejecting claim 1 apply here.

Regarding claims 5/1, 5/2 and 7, the combined teaching of Schofield in view of Konishi as applied to claim 1 teaches that the infrared ray illuminating means (Schofield, fig. 19, 162), the imaging means (Schofield, fig. 19: 14), and the image processor

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(Schofield, figs. 18: 18; 21: 18 and 22: 18) are provided in a car (See Schofield, fig. 19), the infrared ray illuminating means illuminates an outside of the car with the infrared ray, and the imaging means takes an image of the outside of the car (Schofield, page 3, ¶ 0044-0047). Grounds for rejecting claim 1 apply here.

6. Claims 4/1, 4/2 and 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield, 2002/0167589 A1 in view of Konishi, US Patent 5,420,635 and further in view of Nomura, US Patent 6,198,844 B1.

Regarding claim 4/1, 4/2 and 6, the combined teaching of Schofield in view of Konishi fails to teach that the image processor changes the mask, according to an average gradation on the whole screen formed by the images of different light exposure amount, hence to adjust the brightness level.

However, Nomura teaches a method of adjusting the brightness of an image by creating a mask to be applied to said image, wherein said mask is produced taking in consideration the average gradation of the image on the whole screen formed by the image in order to adjust the brightness level of said image (Col. 9, lines 1-32; col. 10, lines 39-65 and col. 11, lines 18-26).

Therefore, taking the combined teaching of Schofield in view of Konishi and further in view of Nomura as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schofield and Konishi by changing the mask, according to an average gradation on the whole screen formed by the images of different light exposure amount, hence to adjust the brightness level. The

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motivation to do so would have been to adjust the saturation levels of the dark and bright areas and to keep good reproduction of the contrast and gradation of each photographic object as suggested by Nomura (Col. 11, lines 18-27).

Regarding claim 8, the combined teaching of Schofield in view of Konishi and further in view of Nomura as applied to claims 4/1, 4/2 and 6 teaches that the infrared ray illuminating means (Schofield, fig. 19, 162), the imaging means (Schofield, fig. 19: 14), and the image processor (Schofield, figs. 18: 18; 21: 18 and 22: 18) are provided in a car (See Schofield, fig. 19), the infrared ray illuminating means illuminates an outside of the car with the infrared ray, and the imaging means takes an image of the outside of the car (Schofield, page 3, ¶ 0044-0047). Grounds for rejecting claims 4/1, 4/2 and 6 apply here.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

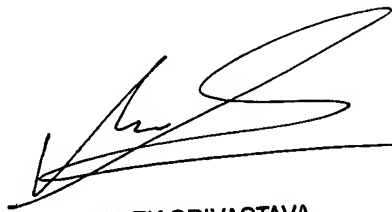
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernandez
Examiner
Art Unit 2622

NDHH
December 2, 2006



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600